

OPENING CEREMONY

Sunday, 15 May 2011

ICC-Berlin - Internationales Congress Centrum

Be part of the Opening Ceremony and join us in the promotion of scientific excellence in the International Awards Ceremony. Meet old friends and make new ones coming from across the world enjoying phantastic music, drinks and food.

17:30 - 19:30

OPENING CEREMONY

- Welcome Addresses
- Awards Ceremony

IFCC Distinguished Clinical Chemist Award

IFCC-Henry Wishinsky Award for Distinguished International Services (since 1990)

IFCC Award for Distinguished Contributions in Education

IFCC-Abbott Award for Significant Contributions in Molecular Diagnostics

IFCC Distinguished Award for Laboratory Medicine and Patient Care

IFCC-Robert Schaffer Award for Outstanding Achievements in the Development of

Standards for use in Laboratory Medicine

IFCC-Roche Young Investigator Award

EFCC-Roche Scientific Award for Laboratory Medicine

EFCC-Labs Are Vital Award for Excellence in Outcomes Research in Laboratory Medicine

DGKL Prize "Biochemical Analysis" - *Sponsored by Sarstedt*

- Opening Lecture
- Music Performances

19:30 - 22:30

WELCOME PARTY



Opening Ceremony

SCIENTIFIC PROGRAM

Monday, 16 May 2011

9:00 - 11:00

PARALLEL SESSIONS

Symposium 1

BIOMARKERS FOR THE DIAGNOSIS OF CARDIOVASCULAR DISEASES

- Clinical implication of high sensitive troponin testing
S. Blankenberg (Germany)
- Quality specifications for troponin assays
R. Christenson (USA)
- Cellular and molecular imaging
R. Choudhury (United Kingdom)
- BNP and Heart failure
C. Müller (Switzerland)

Symposium 2

DIAGNOSTIC CHALLENGES IN LIVER DISEASE

- Non-alcoholic fatty liver disease (NAFLD)
V. Ratziu (France)
- Biomarkers of fibrogenesis for the diagnosis and the activity of the fibrosis process in liver diseases
M. Vaubourdolle (France)
- Hepatocellular carcinoma: Molecular pathogenesis and clinical aspects
H. Blum (Germany)
- Occult hepatitis B infection: Diagnosis and significance
W. Gerlich (Germany)

Year un review

CLINICAL CHEMISTRY 2010 AND BEYOND: OPPORTUNITIES AND CHALLENGES FOR THE NEXT DECADE

- Next-generation sequencing of plasma DNA for molecular diagnosis
D. Lo (Hong Kong)
- Drugs of abuse testing, from urine to oral fluid: Scientific and legal ramifications
M. Huestis (USA)
- Laboratory and clinical implications of high-sensitivity troponin assays
F. Apple (USA)
- The diagnostic proteome: Prospects for biomarker discovery and validation in plasma
L. Anderson (USA)

Symposium 3

TUMOR MARKERS IN CANCER

- Circulating tumor cells and bone marrow micrometastases
K. Pantel (Germany)
- Measurement and diagnostic use of Prostate-Specific Antigen (PSA)
U.H. Stenman (Finland)
- Methylated genes in cancer progression and clinical application
D. Sidransky (USA)
- Proteomic approaches for novel biomarker discovery
V. Kulasingam (Canada)

SCIENTIFIC PROGRAM

9:00 - 11:00

PARALLEL SESSIONS



Symposium

eLEARNING AND DISTANCE EDUCATION IN CLINICAL CHEMISTRY AND LABORATORY MEDICINE

- Webinars, streaming media, blogs and other e-communications
- A. Lyon (Canada)
- Labtestsonline: Transmitting laboratory medicine in the context of national and international guidelines
- M. Klouche (Germany)
- IFCC Experiences with distance learning
- E. Jacobs (USA)
- e-Learning experiences of National Societies of Clinical Chemistry and Laboratory Medicine
- P. Kocna (Czech Republic)

Symposium 4

ACUTE AND CHRONIC KIDNEY DISEASES. AN UPDATE

- Unmet clinical needs in assessing CKD
- G. Jones (Australia)
- Cystatin C as estimates of renal function in CKD
- A. Grubb (Sweden)
- Biomarkers of acute kidney injury
- C. Ronco (Italy)
- Dyslipidemia of chronic renal disease
- O. Samuelsson (Sweden)



Symposium

ROLE OF NON-MEDICAL SCIENTISTS

- Scientific methods in medicine
- W. Bauersfeld (Germany)
- The advance of the science in medicine
- G. Raabe-Meyer (Germany)
- Medical laboratory manager – Non-analytical work
- R. Lichtinghagen (Germany)
- Requirements for excellence in laboratory medicine – A melting pot of biosciences and medicine
- N. Gässler (Germany)

Simultaneous translation from German to English will be provided



Workshop 1 (9:00-10:30)

REPORTING HbA1c FOR MONITORING AND DIAGNOSIS: THE DEVIL'S IN THE DETAIL

- Estimated average glucose 2 years on
- E.S. Kilpatrick (United Kingdom)
- Status of HbA1c measurement and goals for improvement
- R. Little (USA)
- EQA: HbA1c fit for the diagnosis of diabetes?
- C.W. Weykamp (The Netherlands)

SCIENTIFIC PROGRAM

Monday, 16 May 2011

11:30 - 12:45 PLENARY SESSION

MOLECULAR TUMOR DIAGNOSTIC

- **The potential impact of individualized therapy approaches on pediatric cancer clinical research: Technology validation and global access.**



G. H. Reaman (USA)

Gregory H. Reaman, M.D., is Chair of the Children's Oncology Group (COG) since its inception in 2000. The COG is comprised of over 200 member institutions, dedicated to clinical, translational, and epidemiology research in childhood cancer throughout North America, Australia, and New Zealand.

Dr. Reaman is a Professor of Pediatrics at The George Washington University School of Medicine and Health Sciences and a member of the Division of Hematology-Oncology at the Children's National Medical Center in Washington, D.C., which he directed for nearly 18 years.

Dr. Reaman serves or has served on the Editorial Boards of *Leukemia*, *Journal of Clinical Oncology*, *Journal of Pediatric Hematology/Oncology*, *Pediatric Blood and Cancer*, *The Oncologist*, *Cancer*, and *Physicians Data Query (PDQ)*, National Cancer Institute as well as the ASCO Cancer Foundation's www.cancer.net. He has served as an Associate Editor of *Cancer and Leukemia and Lymphoma*.

- **Cancer gene expression: a systems biology approach to biomarker and drug development**



W. N. Keith (United Kingdom)

Nicol Keith obtained his undergraduate training in genetics at Edinburgh University before undertaking his PhD studies at the CRUK Beatson Institute for Cancer Research in Glasgow. After post-doctoral research in areas related to cancer drug resistance, he established his research program in the Department of Medical Oncology at Glasgow University. In 2004 he became Professor of Molecular Oncology at the Centre for Oncology & Applied Pharmacology of Glasgow University. Nicol's research is focused on the development of novel therapeutics that target cellular senescence and telomerase.

The approach is based on integrating within a bioinformatic framework a wide variety of external and in-house data sources with high content screening. Nicol is a founder and Director of Senectus Therapeutics Ltd. a drug discovery company focused on the development of novel therapeutics that target cellular senescence. Nicol is a member of several national and international scientific committees and is particularly active within the International Union Against Cancer (UICC) including chairing the UICC International Cancer Technology Transfer Fellowships (ICRETT) & YY grants committee's which facilitate rapid international transfer of cancer research techniques and technology and clinical management skills across the globe.

- **Posttranslational modifications in tumor diagnosis**



C. Wagener (Germany)

Professor Christoph Wagener is director of the Department of Clinical Chemistry in the Center for Diagnostic of the University Medical Center Hamburg-Eppendorf, Germany. The central laboratories of the clinic are part of the institute. C. Wagener was Dean of the Medical Faculty and President of the German Society of Clinical Chemistry and Laboratory Medicine. Molecular tumor diagnostics is the main research focus of his institute. Specifically, posttranslational modifications such as phosphorylation and glycosylation are characterized by the use of human protein domains involved in molecular recognition.

SCIENTIFIC PROGRAM

Monday, 16 May 2011

13:00 - 14:30 POSTER DISCUSSION

13:00 - 17:45 INDUSTRY SPONSORED WORKSHOPS

14:30 - 16:30 PARALLEL SESSIONS

Symposium 5

FROM BENCH TO BEDSIDE IN AUTOIMMUNITY

- Antiphospholipid syndrome: Pathogenesis
T. Koike (Japan)
- Novel strategies for the treatment of rheumatoid arthritis
S. Gay (Switzerland)
- The many challenges of autoantibody testing
J. Sheldon (United Kingdom)
- New clinical aspects in rheumatoid arthritis - Guideline based management
J.S. Smolen (Austria)

Symposium 6

DIABETES

- IFCC standardised HbA1c: Should the world be as one?
W.G. John (United Kingdom)
- Genetics of type 2 diabetes - are we getting any closer?
A. Rosengren (Sweden)
- HbA1c in the diagnosis of diabetes: Opportunities and problems
D. Sacks (USA)
- Molecular and biochemical mechanisms of diabetic complications
P. Gillery (France)

Workshop 2

(14:30-16:00)



AFCB

EMERGING INFECTIONS AT AFCB COUNTRIES

- Antimicrobial resistance: An emerging public health problem
Z. Hallaj (Egypt)
- Malaria: A global threat
E.T. Khalil (Sudan)
- Tuberculosis: The forgotten disease
G. Shannan (Syria)

Monday 16 May

SCIENTIFIC PROGRAM

14:30 - 16:30

PARALLEL SESSIONS



Symposium

HOW TO ASSESS THE CLINICAL EFFECTIVENESS OF LABORATORY TESTS?

- Industry and regulatory perspectives: Clinical evidence for IVDs
J. Rueda (Belgium)
- Laboratory perspectives: Testing a test-phases of biomarker evaluation
A.R. Horvath (Australia)
- Epidemiologic and economic perspectives: Evaluating the effectiveness and costs of monitoring
P. Bossuyt (The Netherlands)
- Clinical perspectives: Clinical effectiveness of self-monitoring oral anticoagulant treatment
C. Heneghan (United Kingdom)



Symposium

LABORATORY MEDICINE - QUO VADIS? CONDITIONS, STRUCTURES AND DEVELOPMENTAL TRENDS IN EUROPE

- Concentration in German laboratory medicine – where are we headed?
M. Müller (Germany)
- Laboratory medicine as a medical discipline – is the physician in the laboratory (in)dispensable?
Speaker to be announced
- Laboratory medicine in competition – The Swiss experience
A.R. Huber (Switzerland)
- France on its way to centralised laboratory diagnostics
B. Wiegel (Germany)

Simultaneous translation from German to English will be provided



Interactive Session

PITFALLS IN THE HEMOSTASIOLOGIC DIAGNOSTICS: CLINICAL CASES



Interactive voting will be provided

- Current aspects and future trends in the analysis of blood coagulation
K.T. Preissner (Germany)
- New anticoagulants and routine coagulation tests
A. Haushofer (Austria)
- Two puzzling cases
B. Lämmle (Switzerland)
- General case reports
G. Weigel (Austria)

SCIENTIFIC PROGRAM

Tuesday, 17 May 2011

9:00 - 11:00 PARALLEL SESSIONS

Symposium 7

PHARMACOGENETICS AND PHARMACOGENOMICS

- Pharmacogenetics in the treatment of psychiatric diseases
C. Hiemke (Germany)
- Pharmacogenetic predictors of drug induced liver injury
M. Pirmohamed (United Kingdom)
- The rapidly evolving State of the Art in Clinical Pharmacogenetic applications
M. Linder (USA)
- Pharmacogenetics of anti-cancer therapy
R. van Schaik (The Netherlands)

Year in review

ADVANCES IN CLINICAL CHEMISTRY IN THE FIELD OF NEPHROLOGY AND ENDOCRINOLOGY

- New markers for acute kidney injury
C. Ronco (Italy)
- Beyond creatinine standardisation
J. Delanghe (Belgium)
- POCT glucose measurement and its limitations
D. Bruns (USA)
- The D-Lightful vitamin D for health
M.F. Holick (USA)

Workshop 3 (9:00-10:30)

OXIDATIVE STRESS IN DIABETES MELLITUS

- Role of nrf2 and the antistress gene response in countering oxidative stress in diabetes mellitus
P.J. Thornalley (United Kingdom)
- Oxidative stress markers in diabetic complications
A. Ceriello (United Kingdom)
- Oxidative stress and caloric restriction
J. Skrha (Czech Republic)

Symposium 8

INFECTIOUS DISEASES

- Impact of genomics on molecular epidemiology of MRSA
W. Witte (Germany)
- Helicobacter pylori – a global carcinogenic pathogen
S. Suerbaum (Germany)
- Influenza pandemic, vaccination and pitfalls of communication
S. Becker (Germany)
- The fourth dimension: combining epidemiologic and typing data for the transition from data to knowledge for infectious diseases
D. Harmsen (Germany)

Tuesday 17 May

SCIENTIFIC PROGRAM

9:00 - 11:00

PARALLEL SESSIONS



Symposium

BIOBANKING AND LABORATORY MEDICINE: TWO RESOURCES FOR MODERN HEALTH CARE

- Biobanking and laboratory medicine: Two resources for modern health care
M. Neumaier (Germany)
- Ethical and bio-legal aspects: Crossborder experiences in Europe
M. Kiehntopf (Germany)
- Public health and bio banking – The role of public health genomics
A. Brand (The Netherlands)
- The key role of biobanking for the study of complex diseases
M. Ferrari (Italy)

Symposium 9

HAEMATOLOGY AND ANEMIA

- Diagnostic of thalassemia
A. Huber (Switzerland)
- How can hepcidin help us in the diagnosis of iron disorders?
D.W. Swinkels (The Netherlands)
- Regulation of systemic homeostasis in health and disease
M. Muckenthaler (Germany)
- Laboratory diagnosis of hereditary spherocytosis
M.J. King (United Kingdom)



Symposium

AWARD LECTURE - PRIZE BIOCHEMICAL ANALYSIS

Chairpersons: *K. Lackner* (Germany), *U. Walter* (Germany)

Simultaneous translation from German to English will be provided



Workshop 4 (9.00-10.30)

UPDATE ON CARDIAC TROPONIN - CLINICAL AND LABORATORY ISSUES

- A roadmap for cardiac troponin I standardization and traceability
D. Bunk (USA)
- The round Robin study for cardiac troponin I - Progress report
J. Tate (Australia)
- Clinical use of high-sensitivity troponin assays
H.A. Katus (Germany)

SCIENTIFIC PROGRAM

Tuesday, 17 May 2011

11:30 - 12:45 PLENARY SESSION

ADVANCES IN CLINICAL AND DIAGNOSTIC IMMUNOLOGY

- **Chronic inflammatory bowel disease – From bench to bedside**



M.F. Neurath (Germany)

Markus Neurath (born: 11.10.1965) is an international leading scientist on the field of immunology and endomicroscopy of the gut who was awarded with well-known research prizes for his work, e.g. the UEGF Research Prize. His research deals with the immunologic and molecular mechanisms in the pathogenesis of inflammatory bowel diseases and GI-cancer.

Postdoctoral Training:

1990/1992 - Resident in Internal Medicine, University of Mainz; 1992/1995 - Fellow at Mucosal Immunity Section, NIH, NIAID, MIS (Dr. Strober), Supported by a scholarship from the German Research Council DFG; 1995/1998 - Fellow in Gastroenterology, University of Mainz

Academic Appointments:

1998 Assistant Professor of Internal Medicine (Gastroenterology), University of Mainz; 2000 - Associate Professor of Internal Medicine (Gastroenterology), University of Mainz; 2000 - Visiting Professor at the Harvard Medical School, Brigham and Womens Hospital (Prof. Blumberg, Prof. Glimcher); 2003 - Head of Endoscopy Unit, Professor of Medicine, University of Mainz; 2007 - W3 Professorship: Co-Director I. Med. Clinic; Director Inst. Mol. Medicine; 2009 - W3 Professorship: Chairman Department of Medicine 1 Erlangen

- **Integrative Genomic Analysis of T cell Immunity in Humans**



W. N. Haining (USA)

Dr. Haining is a physician-scientist who received his undergraduate and medical degree from Oxford University, UK. He moved to the United States in 1993 to complete medical training in Pediatrics at Children's Hospital, Boston, and subsequently in Pediatric Hematology/Oncology at Dana-Farber Cancer Institute. After post-doctoral research at MIT and Dana-Farber Cancer Institute, he was appointed to the faculty as Assistant Professor of Pediatrics in 2007 in the Department of Pediatric Oncology. Dr. Haining's research focuses on understanding why the immune system fails in cancer and chronic viral disease. His studies have integrated cutting edge genomics and computational biology approaches with cellular immunology to identify the critical molecular mechanisms that impair the T cell response to HIV and tumor cells. His work has provided novel therapeutic targets to revive defective HIV-specific T cell immunity and have laid the groundwork for the broader understanding of the

immunologic genome.

- **Gene-environment interaction in chronic inflammatory disease**



H. Renz (Germany)

The central research area of Harald Renz is the role of the adaptive immune system in the pathogenesis of allergy and asthma. He is internationally recognized for his work on the role of T-cell effector subsets on initiation, progression and remodelling of chronic inflammatory disease, particularly in bronchial asthma and atopic dermatitis. He was among the first to demonstrate that T-cells play an important role in the development of airway hyperreactivity in asthma and trigger the chronic inflammatory response in this condition. He pioneered the development of disease-related animal models which mimic several important hallmarks of the disease, including initiation, progression and remodelling. In terms of disease-initiation, he provides important contributions to the "hygiene hypothesis". He is serving as immunological study site in several international research consortia and proved the importance of early life events for programming of the immune system. His work

offers novel cellular and molecular explanation for the role of microbes in preventing the development of allergic conditions even in a transgenerational manner.

SCIENTIFIC PROGRAM

Tuesday, 17 May 2011

13:00 - 14:30 POSTER DISCUSSION

13:00 - 17:45 INDUSTRY SPONSORED WORKSHOPS

14:30 - 16:30 PARALLEL SYMPOSIA

Symposium 10

DIAGNOSTIC USE AND VALUE OF FUNCTION TEST IN ENDOCRINOLOGY

- Genetic diagnostic for thyroid and parathyroid diseases
F. Raue (Germany)
- Diagnostic workup of primary aldosteronism
M. Stowasser (Australia)
- Methods for Vitamin D measurement: analytical problems and clinical relevance
E. Cavalier (Belgium)
- Hormonal changes after gastric surgery and obesity interventions
C. Le Roux (United Kingdom)

Symposium 11



POINT OF CARE TESTING - PRACTICAL ASPECTS

- Management of the POCT program in a teaching hospital
D. Rogic (Croatia)
- Update on current and developing POC applications with a global and emerging country focus
B. Goldsmith (USA)
- The operator is key in delivering quality in POC
I. Watson (United Kingdom)
- Designing a quality POCT program using CLSI documents
L.A. Wyer (USA)

Workshop 5 (14.30-16.00)



LESSONS FROM THE ASIAN - PACIFIC MULTICENTER REFERENCE INTERVAL STUDY

- Study design: Strategy for collaboration in the definition of reference intervals
K. Ichihara (Japan)
- Statistical considerations in the generation of reference intervals
J. Boyd (USA)
- Obtaining reference intervals traceable to reference measurement systems
M. Panteghini (Italy)

SCIENTIFIC PROGRAM

14:30 - 16:30

PARALLEL SYMPOSIA



Symposium

ACCREDITATION SHOULD BE FOCUSED ON MORE THAN WELL ORGANISED EXAMINATIONS WITHIN THE LABORATORY

- IVD Directive 98/79/CE in relation to ISO 15189

J.C. Libeer (Belgium)

- Influence of pre-examination aspects on traceability - Are ISO 15189 requirements sufficient and clear?

L. Sprongl (Czech Republic)

- ISO15189: Coverage of validation of results and post-examination aspects: Is this sufficient?

S. Zerah (France)

- The specific roles of assessors during accreditation and beyond

W. Huisman (The Netherlands)



Symposium

QUALITY MANAGEMENT ACCORDING TO THE GERMAN RILIBA EK: AN INTERNATIONAL PERSPECTIVE

- German medical associations directive for quality assurance for medical laboratory tests, history and last issues

W. Vogt (Germany)

- Clinical laboratory quality assurance and management, status in Italy

M. Ogrisek (Italy)

- Clinical laboratory quality assurance and management, status in Austria

M. Hubmann (Austria)

- Root mean square of measurement deviation: a new approach in German Medical Associations Directive for quality assurance for medical laboratory tests

R. Macdonald (Germany)

Simultaneous translation from German to English will be provided



Workshop 6 (14.30-16.00)

THE 2009 INFLUENZA PANDEMIC - LESSONS LEARNED

- The 2009 influenza pandemic - the experience in the southern hemisphere

A. Kelso (Australia)

- Impact of pandemic A/H1N1 virus mutations on drug resistance and virulence

G. Boivin (Canada)

- The role of pathogenic immune complexes in severe disease caused by pandemic influenza

F.P. Polack (Argentina)

Tuesday 17 May

SCIENTIFIC PROGRAM

Wednesday, 18 May 2011

9:00 - 11:00

PARALLEL SESSIONS

Symposium 12

BIOMARKERS IN ACUTE AND CHRONIC BRAIN DISEASES

- Alzheimer disease
G. Casadesus (USA)
- Multiple sclerosis
A.H. Cross (USA)
- Blood biomarkers for the diagnosis and prognosis of stroke
W. Whiteley (United Kingdom)
- S100B protein: A screening tool for the diagnosis of minor head injury
J.L. Beaudoux (France)

Year in review

DEVELOPMENTS IN CLINICAL LABORATORY PRACTICE

- Translational medicine: The case of laboratory medicine
M. Plebani (Italy)
- Risk management in the pre-analytical phase
G. Lippi (Italy)
- Risk management in the analytical phase
J. Westgard (USA)
- Reference values and beyond
F. Ceriotti (Italy)

Workshop 7 (9.00-10.30)

CLINICAL PHARMACOGENETICS

- CYP2D6 Genotyping to guide use of tamoxifen in breast cancer
K. Weck (USA)
- Pharmacogenetics of coumarin treatment
J. Oldenburg (Germany)
- Can drug induced liver injury be predicted by pharmacogenetics ?
T. Szekeres (Austria)

Symposium 13

PRENATAL AND NEONATAL SCREENING

- Pre-eclampsia: Genetic and epigenetic aspects
C. Oudejans (The Netherlands)
- An update on antenatal screening for Down's syndrome
N. Wald (United Kingdom)
- Fetal DNA in the maternal circulation: Prospects for prenatal screening and diagnosis
D. van den Boom (USA)
- Recommendations in prenatal screening in the world and their connection to other diseases as thyreopathie
T. Zima (Czech Republic)

SCIENTIFIC PROGRAM

9:00 - 11:00

PARALLEL SESSIONS



Symposium

STANDARDIZATION IN MOLECULAR DIAGNOSTICS

- The need for standardization in molecular diagnostics
M. Pazzagli (Italy)
- Nucleic Acid Reference Materials (NARMs) for molecular diagnostic testing: Definitions and descriptions
D. Payne (USA)
- The IFCC network of molecular diagnostic centres
F. Rousseau (France)
- An IFCC molecular diagnostic center in action
R. van Schaik (The Netherlands)

Symposium 14

ALLERGY DIAGNOSTICS

- Emerging concepts in individualized therapy of atopic dermatitis
T. Bieber (Germany)
- Component-based diagnostics-recombinant allergens as diagnostic tools
R. Valenta (Austria)
- Carbohydrate allergens
T.A.E. Platts-Mills (USA)
- The role of vitro tests in the diagnosis of food allergy
T. Werfel (Germany)



Symposium

DEVELOPMENT OF A TRANSCRIPTOMIC, PROTEOMIC AND METABOLOMIC DATABASE FOR HUMAN BLOOD CELLS

- Problems and solutions for consolidated blood cell proteome analysis
H.E. Meyer (Germany)
- A data storage and retrieval system for across-Omics data integration in eukaryotic systems
K. Helsen (Belgium)
- The Proteome of resting and activated platelets
R. Zahedi (Germany)
- Transcriptomics, proteomics and lipidomics from megakaryopoiesis to platelet senescence
G. Schmitz (Germany)

Simultaneous translation from German to English will be provided



Workshop 8 (9.00-10.30)

MOLECULAR DIAGNOSIS OF INFECTION

- *Speaker and title to be announced*
- Challenges of molecular diagnosis - The leprosy model
V. Vissa (USA)
- Molecular diagnosis of viral infections
L.T. Moraes Figueiredo (Brazil)

Wednesday 18 May

SCIENTIFIC PROGRAM

Wednesday, 18 May 2011

11:30 - 12:45 PLENARY SESSION

THE BRAIN: BIOLOGICAL MARKERS AND CEREBRAL DISEASES

- **Alzheimer's disease: from molecular pathology to diagnosis and treatment approaches**



R.N. Martins (Australia)

Professor Ralph Martins' career in Alzheimer's disease has spanned 25 years and resulted in over 200 publications in mid to high impact journals. He established the McCusker Foundation for Alzheimer's Disease Research. In 2004, Martins was appointed to the inaugural Chair in Ageing & Alzheimers at Edith Cowan University. He is a Snr Editor, for the Journal of Alzheimer's Disease and Editorial Board Member for CNS & Neurological Disease. He brought together researchers from Western Australian universities, hospitals and aged care providers to establish the Centre of Excellence for Alzheimer's Disease Research of which he is director. With Professors Colin Masters and David Ames was successful in obtaining a CSIRO Flagship grant to identify early diagnostic markers of AD. He is a board member of 3 research foundations and several committees for national research organizations. He

founded the Western Australian biotech company Alzhyme to develop anti-amyloid drugs for Alzheimer's Disease. This has allowed Alzhyme to take a lead compound from concept to successful animal trials in 4 years. In 2009 he was awarded the Western Australian, Australian of the Year for 2010.

- **Biomarkers in multiple sclerosis**



M. Comabella (Spain)

Education/Training

1990 University of Barcelona - MD Medicine

1995 Hospital Vall d'Hebron - Specialist Neurology

Scientific Training and Experience

1992 - 1995 Resident in Neurology. Hospital Vall d'Hebron, Barcelona. Spain

1996 - 1998 Research fellowship in Neuroimmunology. Harvard Medical School, Center for Neurologic Diseases - Brigham and Women's Hospital, Boston, US

1999 - 2001 Research and Clinical Neurologist. Hospital Vall d'Hebron

Present Position

Research and Clinical Neurologist. Deputy Director Neuroimmunology lab. Clinical Neuroimmunology Unit. Hospital Vall d'Hebron. Barcelona, Spain

- **Mechanisms of neurotoxicity and neurodegeneration**



A. Aguzzi (Switzerland)

Adriano Aguzzi, M.D., Ph.D., is professor and director of the Institute of Neuropathology at the University of Zurich. His research career has focused entirely on prions, exploring how they damage brain cells, why they accumulate in lymphoid organs, and how they reach the brain after entering the body from peripheral sites. Dr. Aguzzi has been Associate Dean for research at the University of Zurich Medical School, and president of the Swiss Society of Neuropathology. He is the Founder and Director of the Swiss National Reference Center for Prion Diseases, and is on the Board of Governors of the Swiss Federal School of Technology. Dr. Aguzzi has developed and patented several diagnostic and therapeutic methods in the field transmissible spongiform encephalopathies. He is an adviser to the British, Italian, and Swiss government on spongiform encephalopathies. He sits on the editorial boards of numerous journals and on

the scientific advisory board of various philanthropic foundations and biomedic-al companies. Among other honors, Dr. Aguzzi has won 2009 the Antonio-Feltrinelli Prize in Rome, as well as the medal of the European molecular biol-ogy organization.

SCIENTIFIC PROGRAM

Wednesday, 18 May 2011

13:00 - 14:30 POSTER DISCUSSION

13:00 - 17:45 INDUSTRY SPONSORED WORKSHOPS

14:30 - 16:30 PARALLEL SYMPOSIA

Symposium 15

NEW DEVELOPMENTS IN HAEMOSTASEOLOGY

- Coagulation factor XIII deficiency
L. Muszbek (Hungary)
- Genetics and epidemiology of Thrombophilia
F.L. Rosendaal (The Netherlands)
- Novel aspects of von Willebrand factor - Platelet glycoprotein Ib interaction and signaling
U. Walter (Germany)
- Monitoring of the anticoagulant therapy
B. Lämmle (Switzerland)

Symposium 16

CONTRIBUTION OF LABORATORY MEDICINE IN LEUKEMIA

- AML: Molecular diagnostics and MRD
A. Neubauer (Germany)
- Identification of prognostic subgroups in acute leukemia by novel phenotypic patterns and MDR assay
J. Kappelmayer (Hungary)
- Diagnosis of AML between morphology and next generation sequencing
T. Haferlach (Germany)
- Myeloproliferative Neoplasia: Diagnostic tools for classification and therapy guidance
J. Westermann (Germany)

Workshop 9 (14.30-16.00)

WHAT PAPERS WILL BE PREFERRED IN THE FUTURE RELATED TO LABORATORY MEDICINE? EDITORS POINT OF VIEW

- Ethical issues involving publications
A.H.B. Wu (USA)
- Position in your journal about the "peer review"? Is there any alternative?
M. Plebani (Italy)
- The role of editors in improving scientific journals
N. Rifai (USA)

Wednesday 18 May

SCIENTIFIC PROGRAM

14:30 - 16:30

PARALLEL SYMPOSIA



Symposium

A SCIENTIFIC APPROACH TO THE POST-ANALYTICAL PHASE

- How to use information on biological variation in an evidence-based way
B. Bartlett (United Kingdom)
- Reflective testing - Is there evidence that it is worthwhile and for which clinical problems?
W. Oosterhuis (The Netherlands)
- Post-analytical external quality assessment - A way to assess test requesting and interpretation?
S. Sandberg (Norway)
- Postanalytical errors in lipid & lipoprotein testing
M. Langlois (Belgium)



Symposium

RESEARCH FUNDING BY THE FOUNDATION OF PATHOBIOCHEMISTRY AND MOLECULAR DIAGNOSTICS OF THE DGKL – 10 YEARS ON

- Immunoprofiling of the new variable immunoreceptor of neutrophils in acute systemic inflammation
W. Kaminski (Germany)
- Pathogenesis of the antiphospholipid syndrome
N. Prinz (Germany)
- Role of protease signalling in vascular disease
B. Isermann (Germany)
- Sphingoid bases – A new class of biomarkers?
T. Hornemann (Switzerland)

Simultaneous translation from German to English will be provided



Interactive Session



Interactive voting will be provided

CHALLENGES AT THE CLINICAL INTERFACE

- Interpretative paradigm 1: Endocrinology case
D.B. Freedman (United Kingdom)
- Interpretative Paradigm 2: Water and electrolytes case
R. Horvath (Australia)
- Interpretative paradigm 3: Toxicology case
M. Hallworth (United Kingdom)
- Interpretative paradigm 4: Diabetes case
E.S. Kilpatrick (United Kingdom)

SCIENTIFIC PROGRAM

Thursday, 19 May 2011

9:00 - 11:00 PARALLEL SYMPOSIA

Symposium 17

NEW STRATEGIES IN MOLECULAR DIAGNOSTIC

- DNA melting analysis: From fundamentals to practical applications
C.T. Wittwer (USA)
- Quality assurance and quality control in the routine molecular diagnostic laboratory
H. Kessler (Austria)
- Next-generation sequencing in leucemia leukemia diagnostics
A. Kohlmann (Germany)
- High Throughput qPCR Expression Profiling, from tissue samples to single cells
M. Kubista (Sweden)

Symposium 18

STANDARDIZATION AND QUALITY CONTROL ISSUES IN EMERGING AND DEVELOPING COUNTRIES

- Analytical quality in Latin America area
G. Migliarino (Argentina)
- Quality assurance program in Arab countries
F. Harb (Syria)
- Standardization and quality control issue in emerging and developing countries
E. Frank (Germany)
- Current status of quality management in laboratory medicine in China
H. Shang (China)

Workshop 10 (9.00-10.30)

STANDARDISATION OF COMPLEX ANALYTE MEASUREMENTS: THE CLINBIOTRACE PROJECT

- The case of human growth hormone: measurement limitations and desirable performance for clinical use
M. Bidlingmaier (Germany)
- Making Laboratory Medicine results comparable: understanding the measurements
H. Schimmel (Belgium)
- Novel mass spectrometry approaches to detect structural variability in clinically useful proteins: impact on the implementation of reference systems
G. O'Connor (United Kingdom)

Symposium 19

CURRENT CHALLENGES IN THE PEDIATRIC LABORATORY

- The immature platelet fraction as a novel dynamic cellular parameter for predicting and monitoring the course of neonatal thrombocytopenia
A. Weimann (Germany)
- Laboratory markers for differential diagnosis of bacterial and viral infections in children with fever
N. Mayansky (Russia)
- Childhood metabolic syndrome: Pathophysiology and laboratory assessment
K. Adeli (Canada)
- Clinical relevance of B-type natriuretic peptide assay in newborns with congenital heart diseases
M. Cantinotti (Italy)

Thursday 19 May

SCIENTIFIC PROGRAM

9:00 - 11:00

PARALLEL SYMPOSIA



Symposium

STANDARDIZATION OF THE PRE-ANALYTICAL PHASE FOR BIOMARKERS

- EU Project SPIDIA - Standardisation and improvement of generic preanalytical tools and procedures for in-vitro diagnostics
U. Oelmueller (Germany)
- Pre-analytical aspects of tissue-based biomarkers
K. Zatloukal (Austria)
- Pre-analytical aspects of the CARMAGUE study
P. Laitinen (Finland)
- Evidence-based quality guidelines for the pre-analytical phase of blood samples
M. Pazzagli (Italy)

Symposium 20

VITAMIN D: MYTH OR MAGIC

- Vitamin D requirements for health
H. Bischoff-Ferrari (Switzerland)
- A new paradigm for vitamin D activity in bone: autocrine/ paracrine actions
H. Morris (Australia)
- Chemistry and metabolism of vitamin D and its metabolites
G. Jones (Canada)
- 25-Hydroxyvitamin D assay - Are they fit for purpose?
G. Carter (United Kingdom)



IFCC-WASPaLM Symposium

CHRONIC KIDNEY DISEASE - DEVELOPING A NATIONAL TESTING PROGRAM

- CKD - A global clinical perspective
F. Alcantara (Brazil)
- Why a National Program for CKD testing?
D. Seccombe (Canada)
- Key factors in successful national CKD programs
G. Jones (Australia)

Workshop 11 (9.00-10.30)

BIOMARKERS OF ACUTE AND NEURODEGENERATIVE BRAIN DAMAGES

- Diagnosis values of biomarkers for Alzheimer disease
S. Lehmann (France)
- No future for CSF Alzheimer disease biomarkers without standardisation of preanalytical steps
A. Perret-Liaudet (France)
- Cerebrospinal fluid biomarkers for the diagnosis/prognosis of neurological diseases
I. Quadrio (France)

SCIENTIFIC PROGRAM

Thursday, 19 May 2011

11:30 - 12:45 PLENARY SESSION

NEW AVENUES IN LABORATORY DIAGNOSTICS

- **Development and clinical implementation of next generation sequencing for multi-gene diagnostic panels**



K.V. Voelkerding (USA)

Dr. Voelkerding received his medical degree from the University of Cincinnati College of Medicine in 1983. He subsequently pursued postgraduate training in molecular biology and clinical pathology. From 1990 to 2000, Dr. Voelkerding was a faculty member in the Department of Pathology and Laboratory Medicine at the University of Wisconsin-Madison. Currently, Dr. Voelkerding is an Associate Professor of Pathology at the University of Utah and Medical Director for Advanced Technology and Bioinformatics at the ARUP Laboratories. Dr. Voelkerding is board certified in Clinical Pathology and Molecular Genetic Pathology. In 2001, he served as President of the Association for Molecular Pathology. Dr. Voelkerding's career has emphasized the application of nucleic acid based technologies for clinical laboratory diagnostics. For the past two years, his efforts have been directed towards translation of next generation sequencing (NGS) into the clinical laboratory. Dr. Voelkerding's work is focused on utilizing NGS for the analysis of multiple genes whose mutational spectrum lead to overlapping clinical phenotypes. Dr. Voelkerding's presentation will cover technical and bioinformatic approaches coupled with clinical examples of multi-gene diagnostics.

- **Mass Spectrometry: its future in several disciplines of laboratory medicine**



D. Hochstrasser (Switzerland)

Dr. Denis Hochstrasser is the chairman of the Genetic & Laboratory Medicine Department of the Geneva University Hospital and Vice Dean of the Faculty of Medicine, Switzerland. He is also Head of the Laboratory Medicine Division of the Geneva University Hospital, Switzerland's largest acute hospital. He still practices as a Board certified physician. At the academic level, he is full Professor both to Geneva's Department of Structure Biology & Bioinformatics, Medicine Faculty and to the School of Pharmacy, Sciences Faculty. He was one of the founders of the Swiss Institute for Bioinformatics, of the Swiss Centre for Applied Human Toxicology and also of Biobank Swiss Foundation. He is a scientific founder of Geneva Proteomics Inc, Geneva Bioinformatics SA and of Ecllosion SA. His research focus on the discovery of clinical biomarkers in brain, pancreas and kidney diseases, in human toxicology and the development of proteomic & clinical chemistry related technologies.

- **Proteomics strategies looking into cardiovascular disease. Disrupted signalling pathways as biomarkers**



A.J.R. Heck (The Netherlands)

Since 1998 Albert Heck is full professor at Utrecht University at the Science Faculty in the Netherlands. Albert Heck is scientific director of the Netherlands Proteomics Centre (since 2003) and the Bijvoet Centre for Biomolecular Research (since 2006). He is member of the council of the Human Proteome Organization (HUPO) and was chairman of the HUPO Conference in Amsterdam in 2008. In 2001 he was recipient of the Golden Medal of the Dutch Royal Chemical Society. In 2004 he received an honoree Utrecht University "ABC"-professorship and in 2010 he was guest-professor at the ETH Zurich. He has currently published more than 300 papers in internationally reviewed journals.

The Heck laboratory has a track record in proteomics and especially in the analysis of protein post-translational modifications and quantitative proteomics. He introduced and developed TiO₂ as enrichment material for the targeted analysis of phosphopeptides. For quantitative proteomics, the group introduced metabolic stable isotope labeling in multicellular organisms such as *Drosophila* and *C. elegans*, and stable isotope labeling by using chemical approaches. Amongst the broad biomedical interest of the group are (embryonic and adult) stem cells and chemical proteomics approaches in a cardiovascular context.

SCIENTIFIC PROGRAM

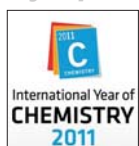
Thursday, 19 May 2011

13:00 - 14:30 POSTER DISCUSSION

13:00 - 17:45 INDUSTRY SPONSORED WORKSHOPS

14:30 - 16:30 PARALLEL SYMPOSIA

Symposium 21



NEW TECHNOLOGIES IN CLINICAL APPLICATION

- NMR-spectroscopy in the diagnosis of metabolic diseases
R. Wevers (The Netherlands)
- Strategies for protein quantification by integrated elemental and molecular mass spectrometry
Q. Wang (China)
- Screening, identifying and quantifying small molecules by hyphenated mass spectrometry in toxicology & drug monitoring
H. Maurer (Germany)
- Recent developments in the biology and applications of plasma nucleic acids
D. Lo (Hong Kong)

Symposium 22

INTERTWINING EMERGENCY MEDICINE AND LABORATORY MEDICINE

- Medical emergencies: What is the laboratory's role?
D.S. Young (USA)
- What should the clinical laboratory and the toxicologist-pharmacologist offer the poisoned patient?
D.R.A. Uges (The Netherlands)
- The clinical laboratory and acts of chemical or biological terrorism...Can we be prepared?
M.D. Kellogg (USA)
- Laboratory resources needed to address unanticipated disasters
C. Kosack (The Netherlands)

Workshop 12 (14.30-16.00)



Joint Session with IATDMCT

TRENDS IN THERAPEUTIC DRUG MONITORING: PERSONALIZED IMMUNOSUPPRESSION

- TDM of immunosuppressants: Current practice and guidelines
T. van Gelder (The Netherlands)
- Use of endogenous biomarkers to achieve personalized immunosuppression in transplant recipients
M. Oellerich (Germany)
- Impact of pharmacogenetics to optimize immunosuppressive therapy
I. MacPhee (United Kingdom)

SCIENTIFIC PROGRAM

14:30 - 16:30 PARALLEL SYMPOSIA



Symposium

TRACEABILITY, STANDARDISATION, HARMONISATION: CONCEPTS AND IMPLEMENTATION

- Traceability in laboratory medicine: A review of the international activities
A. Kessler (Germany)
- Standardization versus harmonization
L. Siekmann (Germany)
- Traceability, standardisation, harmonisation: Concepts and Implementation for heterogeneous analytes
L. Thienpont (Belgium)
- Implementation of standardization in clinical practice: Not always an easy task
M. Panteghini (Italy)

Workshop 13 (14.30-16.00)

VITAMIN DEFICIENCY IN ELDERLY PEOPLE: DIAGNOSIS, PREVENTION AND EFFECT ON AGE-RELATED DISEASES

- B-vitamins and neurodegeneration
R. Obeid (Germany)
- Vitamin D and cardiovascular disease: a review of the epidemiological and clinical evidence
R. Scragg (New Zealand)
- Role of vitamin K in bone health: gamma-carboxylation-dependent and -independent mechanisms
M.J. Shearer (United Kingdom)

Workshop 14 (14.30-16.00)

NOVEL INSIGHTS IN IRON METABOLISM: IMPLICATIONS FOR DIAGNOSTIC MEDICINE

- *title to be announced*
R. Fleming (USA)
- Anemia of chronic disease: markers for diagnosis and treatment monitoring
G. Weiss (Austria)
- Hepcidin-25, a new biomarker for differentiation of iron-restricted erythropoiesis
L. Thomas (Germany)

16:30 - 17:15 CLOSING CEREMONY

Closing Cocktail

See you in Istanbul 2014

